

Application No. 10/717,959
Response dated: March 6, 2006
Reply to Office action of December 5, 2005

Amendment to the Drawings

Please amend Figure 2 to indicate the figure as being "PRIOR ART." No new matter has been added. One (1) clean replacement sheets is provided herewith.

REMARKS

In response to the Office Action dated December 5, 2005, Applicant respectfully requests reconsideration based on the above claim amendments and the following remarks. Applicant respectfully submits that the claims as presented are in condition for allowance.

Claims 1-18 are pending in the present Application. Claim 16 is amended leaving Claims 1-18 for consideration upon entry of the present amendments and following remarks.

Support for the claim amendments can at least be found in the specification, the figures, and the claims as originally filed.

No new matter has been introduced by these amendments. Reconsideration and allowance of the claims are respectfully requested in view of the above amendments and the following remarks.

Drawings

The drawings are objected to because Figure 2 should be designated by a legend such as –PRIOR ART—because only that which is old is illustrated in the figures. Applicants hereby submit a corrected drawing sheet in compliance with 37 C.F.R. 1.121(d). The amended drawing sheet includes all of the figures appearing on the immediate prior version of the sheet and is labeled as “Prior Art.” The one (1) replacement sheet is labeled “Replacement Sheet” in the page header (as per 37 C.F.R. §1.84(c)). Consideration and entry of the Replacement Drawing Sheet for Figure2 is respectfully requested.

Specification

The Examiner indicates that the title of the invention is not descriptive and that a new title that is clearly indicative of the invention to which the claims are directed is required. In response, Applicant submits a new title “OPTICAL POINTING SYSTEM AND METHOD FOR CONTROLLING A SAMPLING RATE AND A MAXIMUM SEARCH WINDOW THEREBY” to replace the current title. Consideration and entry of the new title is respectfully requested.

Claim Rejections Under 35 U.S.C. §102

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Bohn, U.S. Patent 6,429,422 (hereinafter "Bohn"). Applicant respectfully traverses.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

In the instant Office Action, the apertures 84,86 and the firmware of Bohn are being considered the "maximum search window" and the "a maximum search window variable circuit for inputting at least one of the image signal and a movement value to change a size of a maximum search window" of the claimed invention. Applicant respectfully disagrees.

Bohn discloses that the sizes of the apertures 84,86 are designed to pass a desired *amount* of navigator image light. (Col. 9, lines 29-35.) The firmware is disclosed as controlling the aperture assembly 60 to choose between the fixed apertures sizes of the assembly 60. (Col. 10, lines 19-26.) That is, the aperture to be used, as chosen by the firmware, merely defines the *quantity* of light. At best, the firmware of Bohn adjusts the quantity of light inputted (by the apertures) considering the quantity of light detected.

In a non-limiting exemplary embodiment of the present invention, an electronic shutter (in the image sensor 310) similarly adjusts the *quantity* of light, which is detected by the light quantity detector 342 (for example, in FIG. 3) using the image data. (Page 7, line 18 to Page 8, line 17.) The maximum search window variable circuit 340, via the maximum search window calculation circuit 346 (FIG. 3) calculates a size of the maximum *search window*, considering the amount of light detected, which is then used to further calculate a movement value by the movement value calculation circuit 350 (FIG. 3).

That is, the aperture assembly in Bohn corresponds to the electronic shutter in the present invention. Since the maximum search window variable circuit in the present invention is clearly different from the aperture assembly, Bohn fails to disclose a maximum search window variable circuit for inputting at least one of the image signal and a movement value to change a size of a maximum search window and a sensor circuit having a movement value calculation circuit for

calculating the movement value of the image signal using the changed maximum search window in size of Claim 1.

Thus, Bohn fails to disclose all of the limitations of Claim 1. Accordingly, Bohn does not anticipate Claim 1. Applicant respectfully submits that Claim 1 is not further rejected or objected and is therefore allowable. Reconsideration and allowance of Claim 1 is respectfully requested.

Claim Rejections Under 35 U.S.C. §103

Claims 2-7 and 10-17 are rejected under 35 U.S.C. §103(a) as being obvious over Bohn in view of Oliver et al., U.S. Patent No. 6,455,840 (hereinafter "Oliver").

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

As discussed above, Bohn fails to disclose all of the limitations of Claim 1. Claims 2-7, 10 and 11 variously depend from Claim 1 and inherit all of the limitations of Claim 1. Oliver is relied upon as disclosing changing a sampling rate based on the movement value (velocity) in order to conserve power. Therefore, Oliver also fails to disclose maximum search window variable circuit for inputting at least one of the image signal and a movement value to change a size of a maximum search window and a sensor circuit having a movement value calculation circuit for calculating the movement value of the image signal using the changed maximum search window in size of Claims 2-7, 10 and 11 and does not remedy the deficiencies of Bohn.

Regarding Claims 12-15, as discussed above with respect to Claim 1, Bohn fails to disclose a maximum search window variable circuit for inputting at least one of the image signal and a movement value to change a size of a maximum search window. In the instant Office Action, it is conceded that Bohn does not specifically disclose changing a sampling rate.

Oliver discloses pulsing its light source to provide light only when needed. (Abstract)
Therefore, Oliver also fails to disclose a maximum search window variable circuit for inputting at least one of the image signal and a movement value to change a size of a maximum search window of Claim 12 and does not cure the deficiencies of Bohn.

Regarding Claims 16-18, for all the reasons discussed above, Bohn and Oliver fail to disclose changing a sampling rate and a maximum search window for inputting at least one of the image signal and the movement value to generate a sampling rate control signal for changing a sampling rate, and to change a size of the maximum search window of Claims 16-18.

Thus, Bohn and Oliver, alone or in combination, do not disclose *all of the limitations* of Claims 2-7 and 10-17. Accordingly, *prima facie* obviousness does not exist regarding Claims 2-7 and 10-17 with respect to Bohn and Oliver.

Additionally, Applicants respectfully contend that there exists no *motivation to combine or modify* the references to teach the claimed invention.

The object of the invention in Bohn is to provide an ideal amount of light to the navigator optical detector for all object types with varied content. Applicant finds no disclosure or suggestion in Bohn of varying or changing a sampling rate. The object in Oliver is saving power by pulsing its surface illumination light source to provide light only when needed. Applicant finds no disclosure or suggestion in Oliver of changing a size of the maximum search window. Applicant respectfully requests the Examiner to provide an explanation as to where or how in Bohn and Oliver is provided the motivation to modify or combine the references. Therefore, *prime facie* does not exist regarding Claims 2-7 and 10-17 with respect to Bohn and Oliver.

In the instant Office Action, it is stated that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to change the sampling rate of Bohn in view of Oliver to obtain a more efficient device. Applicant respectfully disagrees.

Applicant respectfully submits that Bohn and Oliver fail to provide any objective teaching that would lead one of ordinary skill in the art to combine Bohn and Oliver to teach the limitations of Claims 2-7 and 10-17. Applicant further submits that the rejection of Claims 2-7 and 10-17 merely alleges but does not show that knowledge generally available to one of

ordinary skill in art would lead that individual to combine the relevant teachings of the references to disclose the claimed invention. Applicant respectfully requests the Examiner to provide an explanation of the knowledge generally available to one of ordinary skill in art that would lead that individual to combine the relevant teachings of Bohn and Oliver to disclose the claimed invention. Here again, *prime facie* does not exist regarding Claims 2-7 and 10-17 with respect to Bohn and Oliver.

Since Bohn and Oliver fail to teach or suggest all of the limitations of Claims 2-7 and 10-17 and that there exists motivation to modify or combine the references, clearly there cannot be a reasonable likelihood of success in forming the claimed invention by the Examiner's suggestion of modifying or combining Bohn and Oliver.

Thus, the requirements of *prime facie* obviousness are not met by the Examiner's suggestion to combine Bohn and Oliver. Applicant respectfully submits that Claims 2-7 and 10-17 are not further rejected or objected and are allowable. Reconsideration and allowance of Claims 2-7 and 10-17 are respectfully requested.

Allowable Subject Matter

Applicant gratefully acknowledges the Examiner's noting the allowable subject matter in Claims 8, 9 and 18. Applicants respectfully submit that independent Claims 1 and 16, from which Claims 8, 9 and 18 variously depend, are allowable for all the reasons discussed above. As such, Applicants have not rewritten Claims 8, 9 and 18 in independent form at this time.

Conclusion

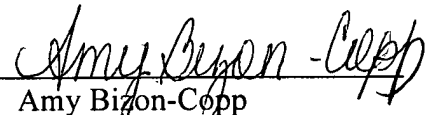
In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicant's attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

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In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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